XXIX.—On the Russian Arctic Expedition of 1900-1903.— Part II.\* By H. E. DRESSER, F.Z.S., M.B.O.U.

Tringa canutus.-The Knot was first seen in Middendorff Bay on the autumn migration. At the Sarja roadstead on the Western Taimyr it arrived from the 25th or 26th of May to the 7th or 8th of June and numbers bred there, as recorded in Dr. Walter's notes, where full particulars of the nidification of this species are given. Mr. Birulia states that the incubation-period is from 20 to 25 days. From the 19th of July to the 1st of August (new style), fully fledged young birds were seen, which, however, were not able to fly. In New Siberia in 1902 the first Knots arrived apparently in pairs, and commenced nidification at once. For the site of its nest the bird selects an elevation in the tundra, but it does not always choose a dry spot, as Mr. Birulia found one example on the Taimyr in a damp place, surrounded by pools of water. The nest is a round hollow in the turf about 11 cm. in diameter and from 7 to 8 cm. in depth, but is well lined with lichen until the depth is reduced to about 5 cm. The material consists chiefly of Thomnolia vermicularis or less frequently of Dufourea arctica, as is also the case in the nests of other Waders. These lichens, being tubular and filled with air, are especially suitable as composing an isolating layer above the frozen ground. Mr. Birulia found the first nest on New Siberia on the 20th June/6th July, containing a full clutch of four eggs much incubated, and soon afterwards he saw young birds in down. The chicks are able to run directly they are hatched, as Mr. Birulia found a nest containing the shells of three eggs and a young bird just emerging from the fourth: the three young birds were found near the nest and had evidently left it on his approach. They squat and hide immediately a stranger approaches, and assimilate so well to the surrounding lichen that it is almost impossible to discover them. When the young are hatched the old birds conduct them from the lonely elevated portions of the tundra to the valleys, where the vegetation is more

\* Concluded from p. 517.

luxuriant and the pools teem with insect-life and especially with gnats. Here they associate with other Waders, such as Sanderlings, Turnstones, &c. All attempts to find the nest of the Knot by watching the birds proved fruitless, as they were very shy during the nesting-season and the eggs were only found by chauce. When the parent is disturbed and leaves its nest it does not return for a long time, unless the eggs are hard-set. The difficulty of finding the nest is increased by the fact that the Knot is very unsociable during the breedingseason and avoids other Waders as well as individuals of its own species. It nests in lonely places far from the sea-coast, where, in the Siberian islands at least, bird-life is chiefly About the middle of August (old style), concentrated. before the first frost, the young Knots in New Siberia began to collect in flocks, and when the first frosts set in they commenced to leave in family-parties or flocks.

Limosa lapponica was met with on the Taimyr Peninsula, as previously stated ('Ibis,' 1904, p. 220), but was not found breeding there, though Mr. Birulia thinks that a few birds may nest on the Taimyr tundras, as on the 14th/27th August he shot one in Middendorff Bay which had an incubation-spot. On the island of New Siberia he never met with a Godwit.

Calidris arenaria.-Few of this species were seen in Middendorff Bay on passage in the autumn. It was, however, as previously stated ('Ibis,' 1904, p. 229), found breeding on the coast of the Western Taimvr, where Dr. Walter obtained its eggs and young in down. Mr. Birulia states that there it was not so common as the other Waders. On the island of New Siberia Mr. Birulia observed the first Sanderlings, migrating north, on the 23rd May/5th June, after which they were seen daily and were one of the commonest of the birds on the tundras; but in spite of every endeavour he never succeeded in finding a nest, as the birds "shewed no anxiety" and did not in any way betray the situation of their nests, while watching and waiting in the cold was most unpleasant. Only on one occasion, on the 6th/19th July, did a Sanderling exhibit any anxiety and tried to lure him away; doubtless the bird had a nest containing highly incubated eggs in the vicinity, but

he did not succeed in finding it. On the 10th/23rd July he captured a family of four young birds in down. Eleven days later he caught a young bird which had the quill-feathers just appearing, and on the 26th July/8th August he obtained young birds which could just fly, after which small and then larger flocks of young birds were seen on the sand-banks, most of which had still remains of down on their heads. They are left by their parents directly they can fly, and are then not shy but can be easily approached. At the first approach of winter, on the 13th and 14th of August (new style) the last flocks were seen, but a few stragglers remained later, and the last two Sanderlings were observed near a sand-bank on the coast on the 5th of September (new style).

Strepsilas interpres was met with both on the mainland and on the island of New Siberia, where it was one of the most common of the Waders.

Grus leucogeranus.—Mr. Birulia did not personally meet with this Crane, as he only visited the Yansk district in the winter. He was informed by the natives that it occurs in small numbers every year on the Yansk tundras up to the coast of the Arctic Ocean and as far north as Cape Sviatoi Nos, as well as on the estuary of the Yana and on those of the other rivers, but breeds there very seldom, and chiefly on the border of the forest-zone. It is said, however, to breed frequently near the village of Kazatchie, and the native who gave this information said that he always found two eggs in the nest.

Somateria spectabilis.—On the Western Taimyr small flocks were seen early in June, and the first nest was found on the 22nd June/5th July. On 8th/21th August a female and two tolerably large young in down were seen. On the island of New Siberia Mr. Birulia had a better opportunity of observing the King-Eider, as it was more numerous there than on the Taimyr, and arrived earlier. He found the first nest, containing a full clutch of eggs, on the 17th/30th June. The nesting-places were on the steep banks of the tundra-lakes or else in low-lying places, usually near a river or a rivulet, both near the sea and also in the interior of the island in valleys where there are many lakes or rivers. The first nest found was in a flat low-lying mossy place near a rivulet and about a couple of feet from a small pool; it was a round depression, not deep, about 25 cm. in diameter, plentifully lined with rather coarse down, and containing six eggs but slightly incubated. When Mr. Birulia was about fifteen paces from the nest the female bird left her nest, at the same time bespattering her eggs with a liquid secretion, and ran about beating the ground with her wings. During the nestingseason the King-Eider is very unsociable and the nests are usually far apart, but on the small islands, where it is safe from the attacks of the Arctic fox, the nests are nearer to each other and it often breeds in company with Geese and Gulls. The female sits very closely, and even when kicked off her nest will try to return at once. Whilst the females are incubating the drakes may be seen in flocks of seven or eight on the small lakes near the nesting-places and not on the sea. From the 26th of July to the 8th of August flocks were seen, and even a day or two later the males had not moulted their plumage.

Somateria fischeri was seen on several occasions on New Siberia, but Mr. Birulia did not shoot it. It is rarer there than the King-Eider and was never seen in flocks, but only in pairs or two pairs together. The first pair was seen on the 28th May/10th June and the last pairs were observed on the 26th June/9th July, always on the coast or in the open sea, and Mr. Birulia never saw any trace of this duck breeding on New Siberia. The ivory merchants never met with S. fischeri on the islands of Liakhovski, Kotelny, or Faddeevski, and it would seem that it comes to New Siberia straight across the sea, probably from the Indighveka. It is well known to the natives of the Yansk district and nests along the entire coast of the Arctic Ocean as far west as the Lena. In the basin of the Mouksounovka river S. fischeri breeds on the borders of the lakes, more rarely on the islands in the river valleys, and almost always far from the sea. It does not sit so closely as S. spectabilis and is shy and difficult of approach. Apparently it does not arrive in the spring or leave in the autumn in large flocks, and at its nesting-place it is seen singly or in pairs.

Somateria stelleri is rare in the Taimyr: Dr. Walter obtained two males, but Mr. Biralia did not see it there. No nest was found, though it apparently breeds on the peninsula. On New Siberia Mr. Birulia first observed it on the 2nd/15th June, and only saw it on two occasions afterwards; he adds that it was even rarer than *S. fischeri*. He only shot one, a young bird, and found no trace of a nest; but the ivory merchants informed him that they occasionally found eggs on all the islands of the archipelago; anyhow, he states, the chief nesting-places of Steller's Eider are on the tundras of the mainland.

Harelda glacialis was met with commonly everywhere.

Branta bernicla was first met with in Middendorff Bay, where large flocks remained during the moulting-season. At the Sarja roadstead it was common and was found breeding on the elevated stony portions of the tundra, where it places its nest amongst the stones, filling the open places carefully with moss, constructing the nest of the same moss and lining it well with down, with which the bird covers the eggs when leaving the nest. Nests were also found in damp places near the lakes, but there, too, they were placed on heaps of stones. On the approach of anyone the male, who acts as a sentinel, utters a warning cry and the female leaves the nest, flying as near the ground as possible for some distance and then rising to join her mate. Mr. Birulia saw thousands on the Kolomeitseff River during the moulting-season, and they also appear to frequent all the other rivers at that season, which seems to extend from about the 25th of July to the 8th of August (new style), while on the 24th of August numerous flocks were seen leaving the Taimyr and passing south-west along the sea-coast.

Branta nigricans was seen in 1902 on New Siberia when it was still winter. This Goose comes to the islands of the New Siberian archipelago in larger numbers than Anser albifrons, but only breeds there to a limited extent. In 1902 Mr. Birulia saw large numbers during the moulting-season, but did not find a single nest, and he considered that it only comes to the islands during the monlting-season; but in 1903 Mr. Brousneff found a few birds nesting at Cape Rojin, New Siberia, and large numbers were found moulting in the plains of the river Bolchaia and its tributaries in the middle of the island. According to the ivory mcrchants, the chief nesting-place of this Goose is on the tundra near the coasts of the Arctic Ocean from the delta of the Yana River along the Rivers Syalakh and Mouksounovka, and further east towards the River Khrom, while large numbers breed on the islands in the vicinity, such as Makar and Streloniki. Not many remain during the moulting-season in the vicinity of their nesting-haunts.

Mr. Birulia was not able to give any particulars respecting the nesting-habits of this Goose from personal observation, but he ascertained from the natives in the Yansk district, and from Messrs. Koltchak and Brousneff, who found nests on the islands of the New Siberian Archipelago, that they were situated differently from those of *Branta bernicla*, as they were placed, like those of *Somateria spectabilis*, in low-lying river-valleys where there were numerous pools of stagnant water or near lakes not far distant from the coast.

Branta nigricans nests also in large numbers near the estuary of the River Balyktaklia on Kotelny Island, which is known to the ivory merehants under the name "Gull Island" and is visited by them for collecting eggs. The nests are mere hollows in the ground, well lined with down. The islands of the New Siberian Archipelago appear to be the northernmost locality where *B. nigricans* occurs in large numbers, though a few pairs may range further north. On the island of New Siberia the last was seen on the 10th/23rd August.

Anser erythropus, Anser albi/rons, and Anser segetum are all three included by Mr. Birulia; but Anser erythropus was only met with on the mainland, and he gives no information respecting the other two species from personal observation.

Chen hyperboreus was not seen by Mr. Birulia personally, but he was informed that it is found all over the tundra of the Yansk district from the estuaries of the Lena, on the plains of the Yana River, along the Syalakh and Mouksounovka Rivers, and even further north towards the Sviatoi Nos. Wassili Dsergheli, who hunts for mammoth ivory every year on the islands of the New Siberian Archipelago, informed Mr. Birulia that, about thirty years previously, when on the island Kovrishka (Great Liakhovski Island) he found near the River Kamleika, a tributary of the Bloudni, a nest of *Chen hyperboreus*. He first saw the male bird, which flew away; he then met with and shot the female. The nest contained three much-incubated eggs.

Nyctea scandiaca was met with on the Taimyr and also on the New Siberian Islands.

Otocorys alpestris was only met with on Kuskin Island, where large numbers were seen.

Anthus cervinus was not uncommon on the Waigatch and on Kuskin Island, but was very rare on the Taimyr, where it was only seen on two occasions.

Saxicola œnanthe.—A young bird was seen on Kuskin Island, and one was also met with on New Siberia Island, but this species appears to be extremely rare on the New Siberian Islands.

*Corvus corone* is said to occur and to breed near Verhoyansk, but Mr. Birulia records this only from hearsay information.

Corvus corax was not observed by Mr. Birulia himself.

*Plectrophenax nivalis.*—Dr. Walter met with this bird breeding commonly on the Taimyr, and Mr. Birulia believes that it nests also on Kotelny Island.

*Calcarius lapponicus* was found commonly and breeds on the Taimyr, and Mr. Birulia remarks that the islands of the New Siberian Archipelago are places very suitable for the nidification of this species.

Parus ater.—On the 5th/18th September, 1900, a single bird came on board the 'Sarja,' and a second two days later. On the 8th/21st September one was seen on the cliffs of the Bay of Kolomcitseff, and three days later, when on an excursion on the shore of Voltchi Bay, Dr. Walter and Mr. Birulia each shot an example. It is interesting that this Titmouse should have been met with so far beyond the limit of the forest-region.

SER. IX.-VOL. II.

599